

# Climate Change and the Insurance Sector

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# Ceres...A Dynamic Network

- A *coalition* of 80-plus investors, environmental, and public interest groups.
- A *network* of more than 70 companies representing diverse industries & businesses.
- A *leader* in bringing companies together with their stakeholders in a constructive dialogue on sustainability issues.
- *Initiator* of the Global Reporting Initiative (GRI), and the Investor Network on Climate Risk.
- The *creator and convener* of the Investor Network on Climate Risk (INCR)

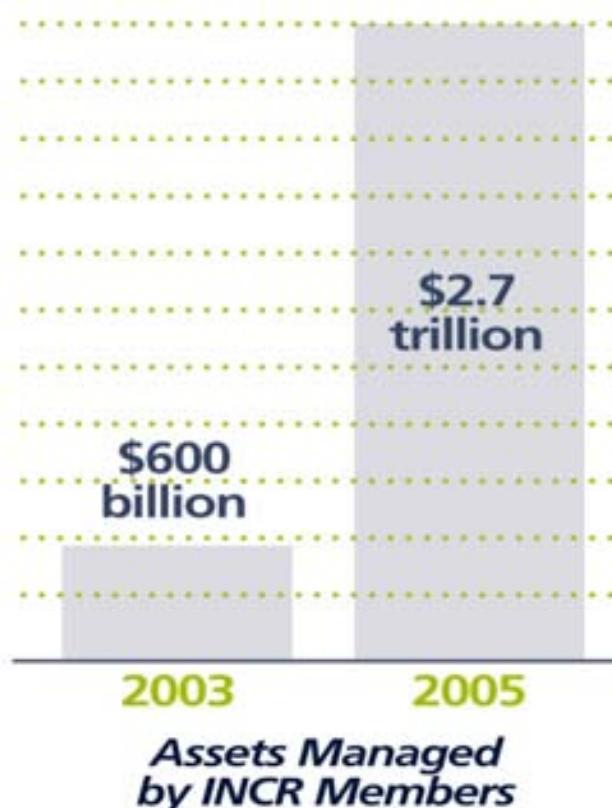
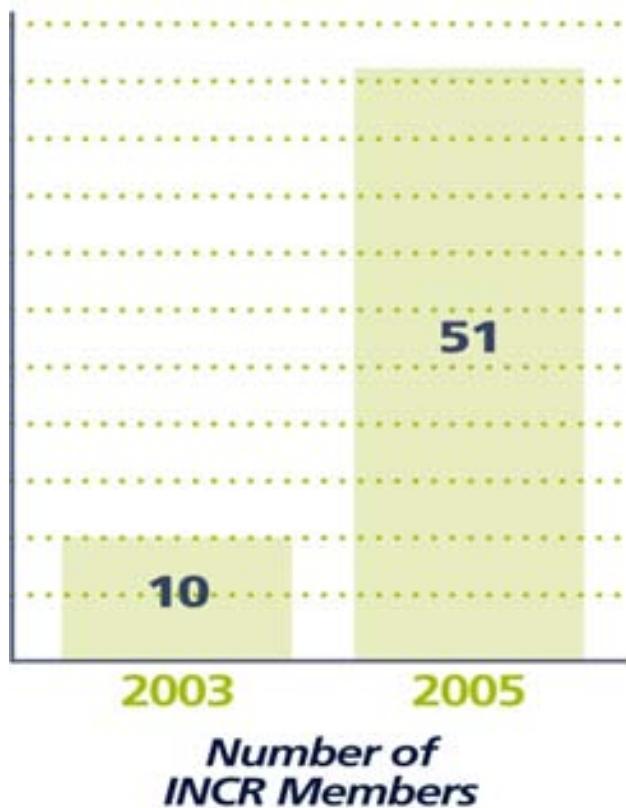
# *Investor Network on Climate Risk*

- Launched at 2003 Institutional Investor Summit on Climate Risk at the United Nations, pension funds formed INCR to promote investor and corporate understanding of:
  - Financial consequences of climate change
  - Fiduciary implications for board members and trustees
- Announced 10 Point Action Plan – May 2005
- INCR has grown 5-fold since 2003; now 50 members and approximately \$3 trillion in assets

# INCR Members

- **State Treasurers (13):** CA, CT, DC, IA, KY, MA, MD, ME, NC, NJ, NM, OR, VT
- **State/City Comptrollers (4):** NY, NYC, CA.
- **Public Pension Funds (6):** CalPERS, CalSTRS, Illinois, MD Retirement, NYCERS, NYSTRS
- **Labor Pension Funds (7):** AFSCME, CWA/ITU, Machinists, SEIU, Sheetmetal Workers, Teamsters, UNITE HERE
- **Religious Funds (6):** Christian Brothers Investment Services, Evangelical Lutheran Church in America, ICCR, Presbyterian Church USA, Tri-State Coalition for Responsible Investment, United Methodist Church General Board of Pensions and Health Benefits
- **Foundations (3):** Nathan Cummings, Rockefeller Brothers Fund, UN Foundation
- **Large Asset Managers (2):** State Street, F&C
- **Small Asset Managers (7):** Boston Common, Calvert, Domini, Ethical Funds, Green Century, Trillium, Walden

# *Investor Network on Climate Risk*



## *Investors are increasingly concerned*

Goldman Sachs, Portfolio Strategy Report, August 26, 2005:

"...whether or not an individual investor is convinced that anthropogenic, that is, manmade greenhouse gases are leading to changes in the Earth's climate, ***this issue will have implications for the financial markets and for corporate performance.***"

## *A critical issue for insurers*

“The insurance industry must start actively adapting in response to greenhouse gas trends if it is to survive... There could hardly be a debate of greater importance to the insurance industry.”

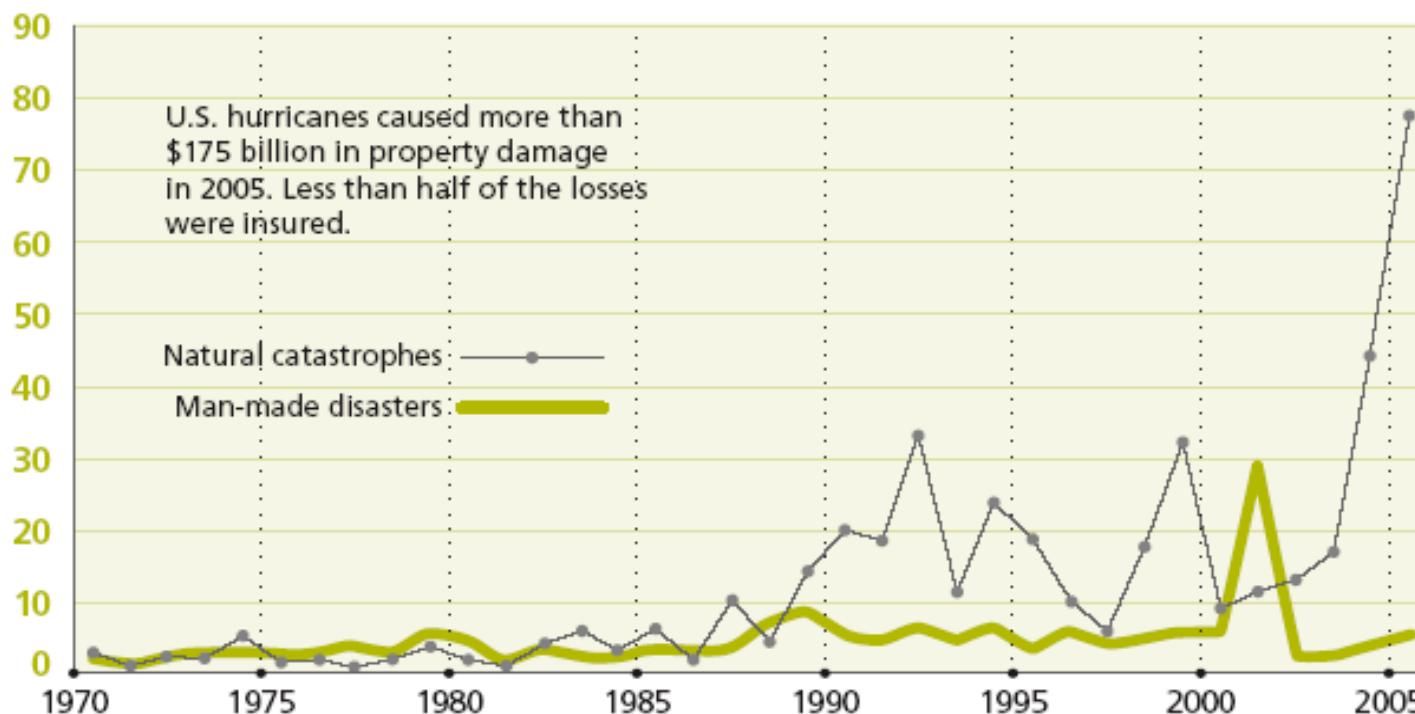
--Lloyd's, *Climate Change: Adapt or Bust*

## *Why should insurers be concerned?*

Climate change has the potential to impact nearly every segment of the insurance industry, including:

- Property, crops and livestock
- Health and life
- Business interruption
- D&O
- Pollution liability
- Breakdown in backwards-looking cat models and actuarial assumptions
- Invested assets

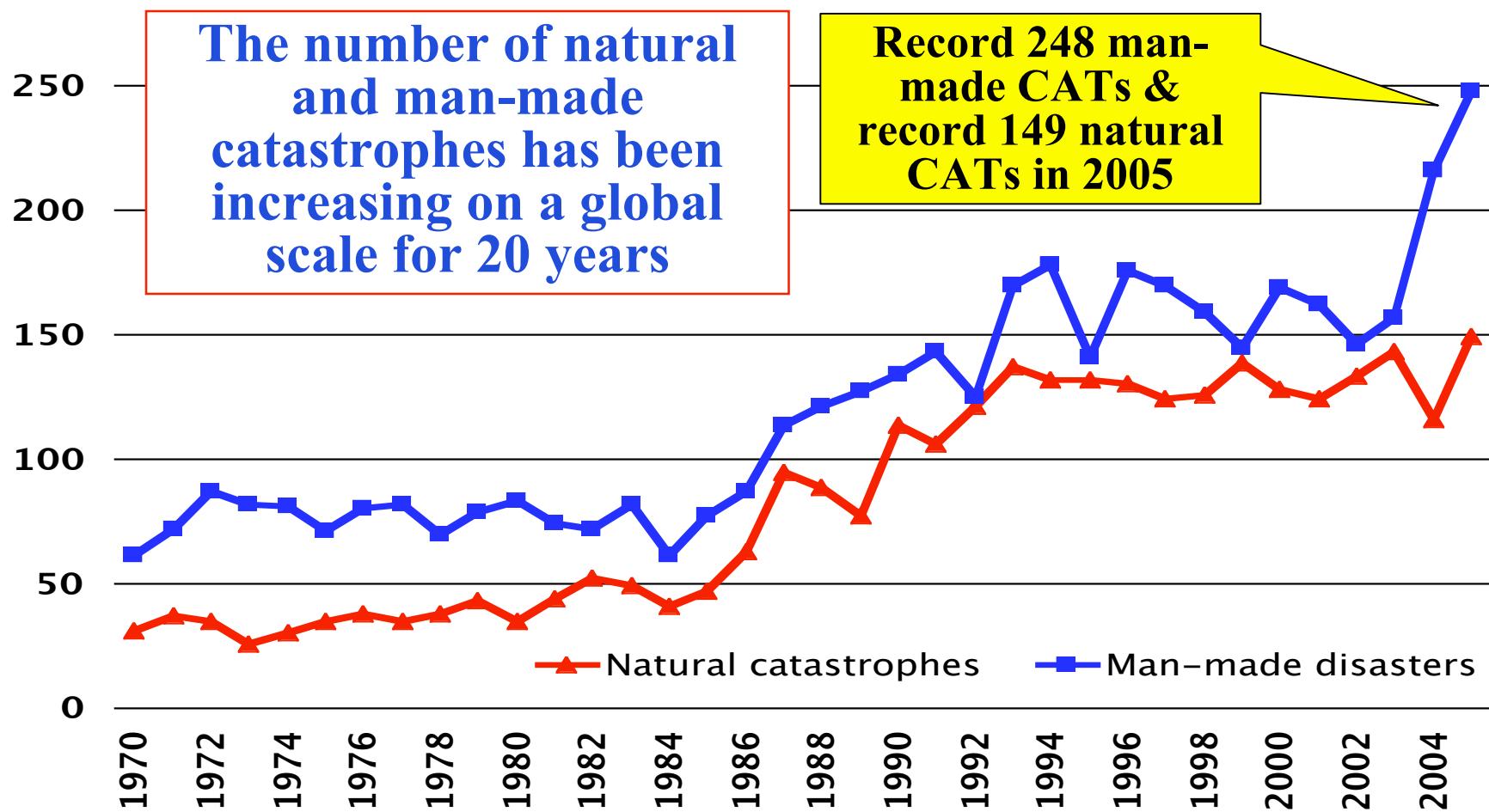
# Insurance Losses Increasing



Insured Losses 1970–2005

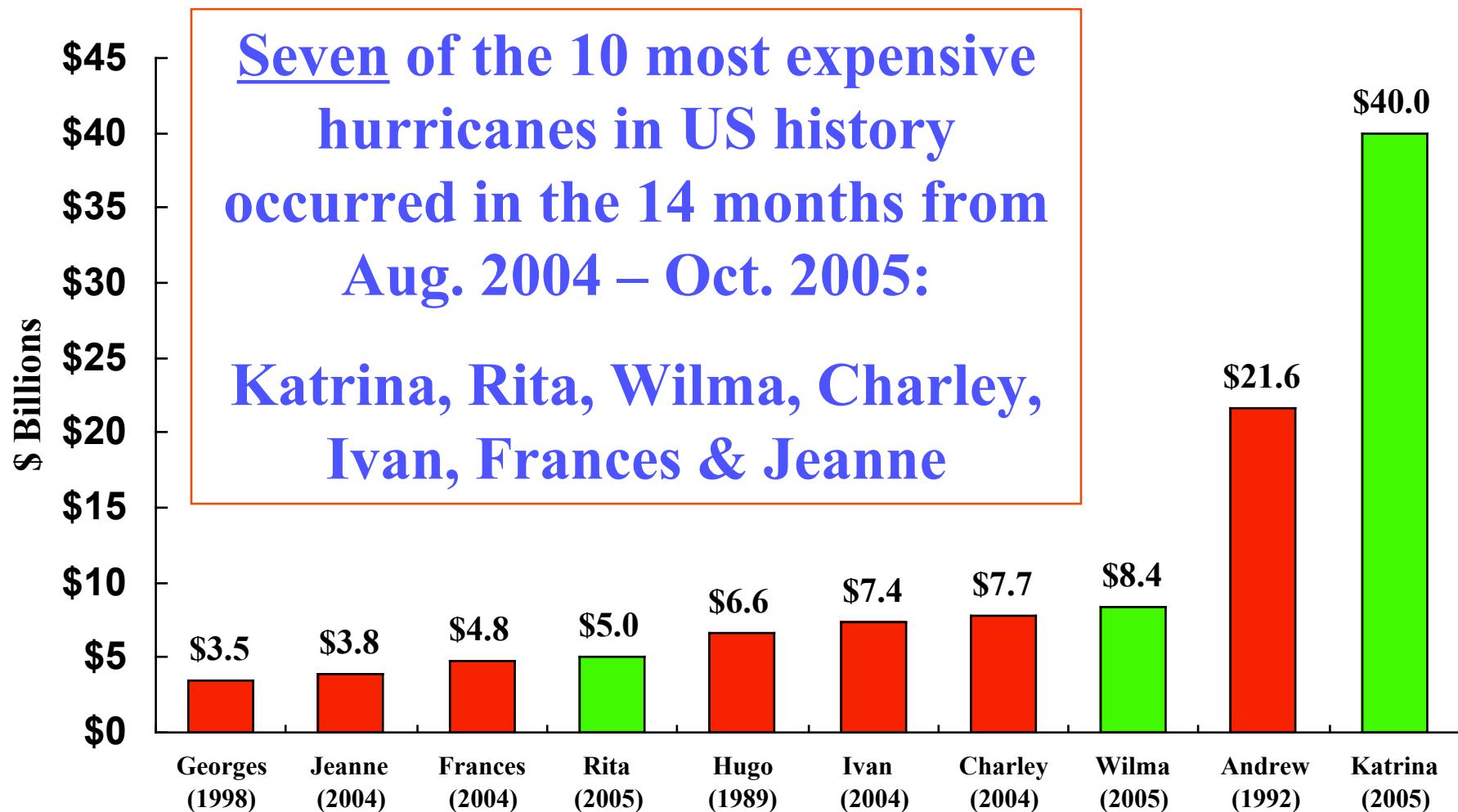
Source: Swiss Re

## Global Number of Catastrophic Events, 1970–2005

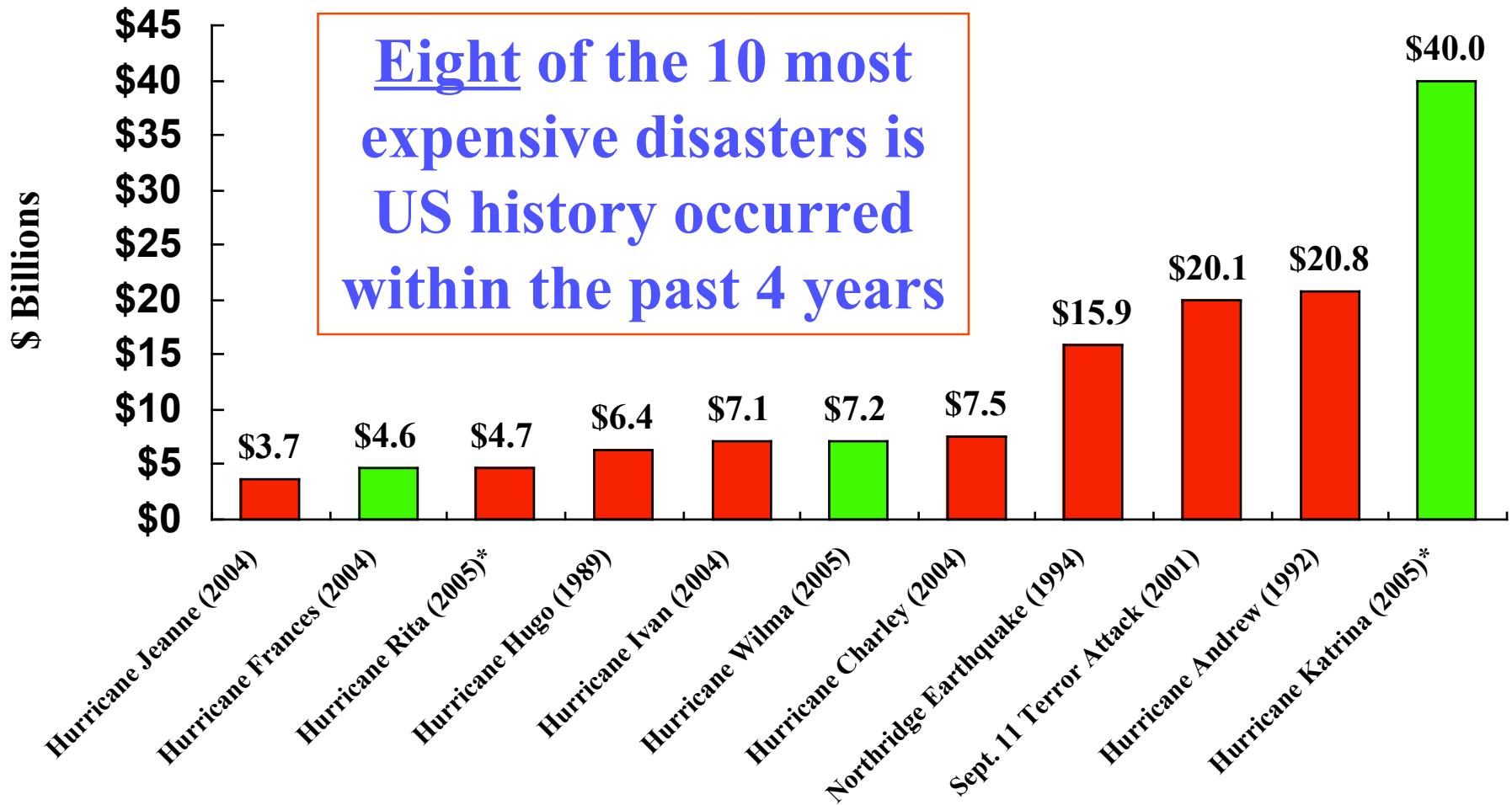


Man-made disasters: without road disasters. Source: Swiss Re, sigma No. 1/2005 and 2/2006.

## Top 10 Most Costly Hurricanes in US History, (Insured Losses, \$2005)



Sources: ISO/PCS; Insurance Information Institute.



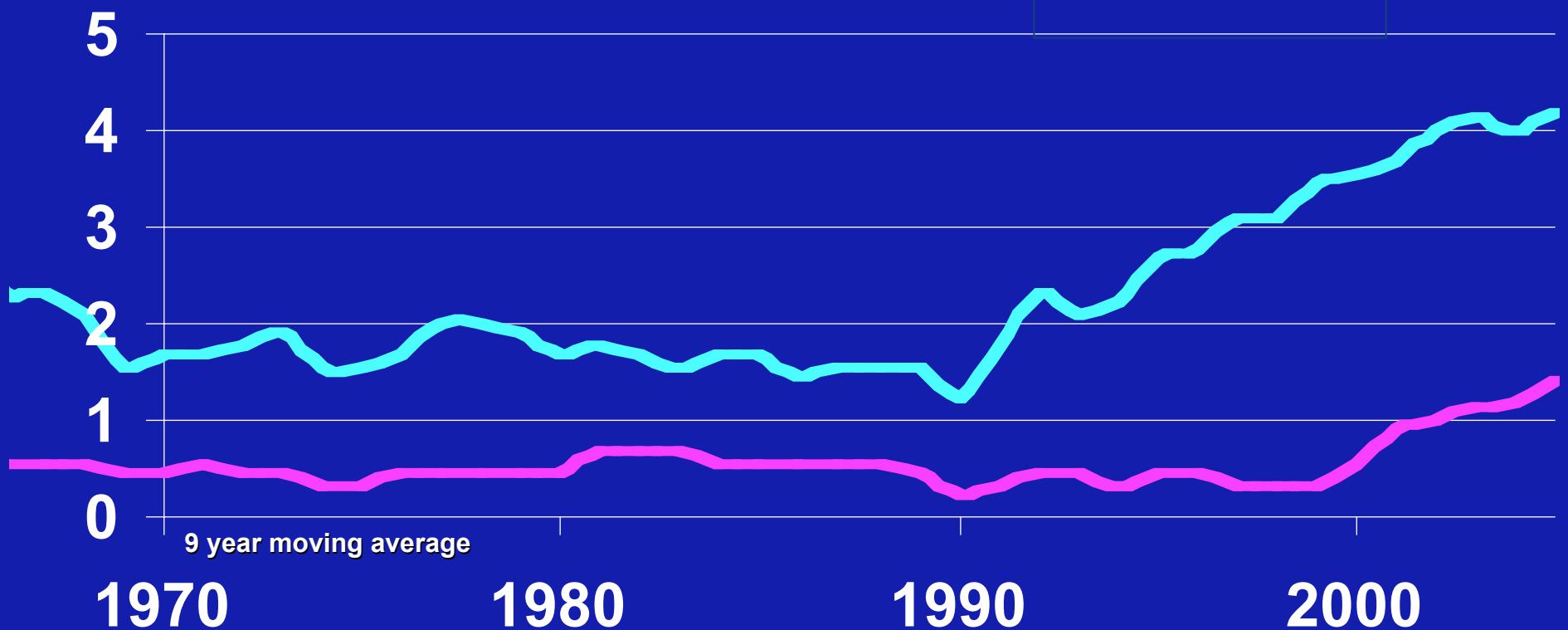
\*III estimate, stated in 2005 dollars, as of 11/01/05.

Note: 9/11 loss figure is for property claims only. Total insured losses (\$2004) are approximately \$34B.  
 Sources: ISO/PCS; Insurance Information Institute.

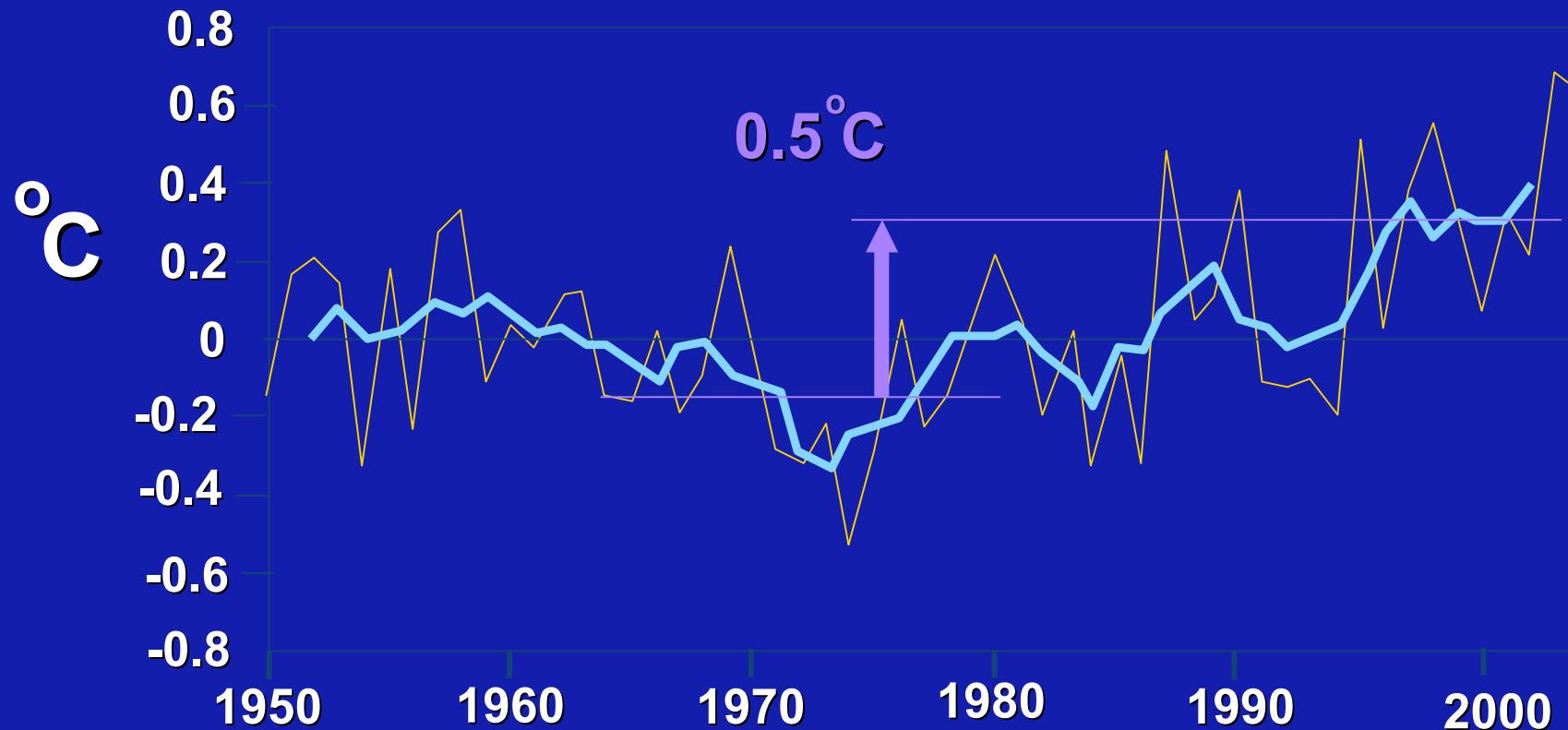
## Records Set in 2005 Atlantic Hurricane Season

- Most tropical storms: 27. Old record: 21 in 1933.
- Most hurricanes: 15. Old record: 12 in 1969.
- Most Category 5 hurricanes: 3 (Katrina, Rita, Wilma. Emily may be classified as a Category 5 upon re-analysis.) Old record: 2 in 1960 and 1961.
- Most hurricane names to be retired: 6 (Dennis, Emily, Katrina, Rita, Stan, Wilma, and possibly others). Previous record: 4 in 1955, 1995, and 2004.
- Most major hurricanes to hit the U.S.: 4 (Dennis, Katrina, Rita, Wilma). Previous record: 3 in 1893, 1909, 1933, and 1954.
- Most damage ever recorded in a hurricane season: \$150 billion. Previous record: approximately \$50 billion dollars (normalized to 2005 dollars) set in 1992 and 2004.
- Highest Accumulated Cyclone Energy (ACE) index: 245. Previous record: 243 (1950). Average for a season is 93.
- Latest end to a hurricane season: January 6 Previous record: January 5, for the 1954–55 hurricane season.

## Atlantic CAT 3–5 Hurricanes

Basin —  
U.S. landfall —

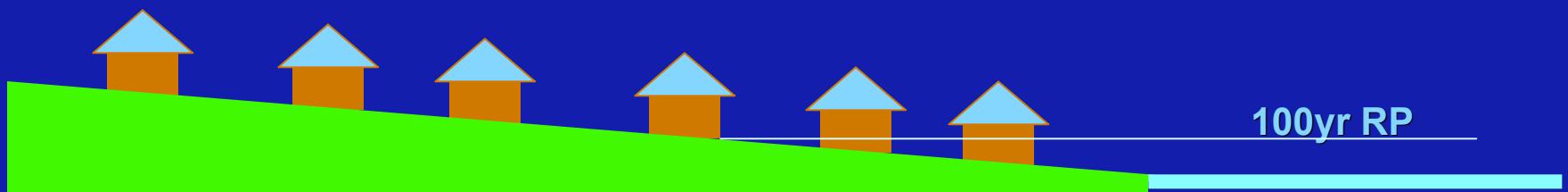
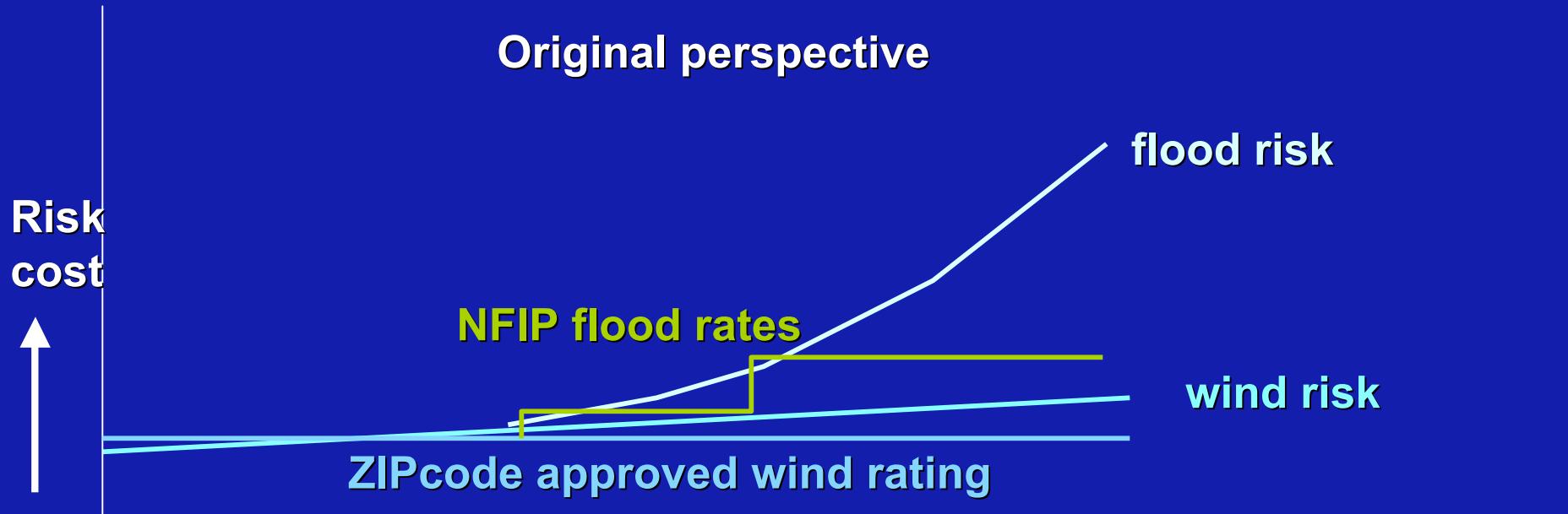
## Tropical Atlantic Sea Surface Temperature Departures (C) During Aug-Oct (1951-2000 BaseLine)



*Recent events have shown capital and pricing models to be wanting*

- Past is no longer prologue
  - Lloyd's: “Industry needs to take new approach to underwriting- looking ahead and not just basing decisions on historical patterns.”
- What does this mean for natural peril insurability, particularly windstorms?

# Who is at risk from coastal storms?



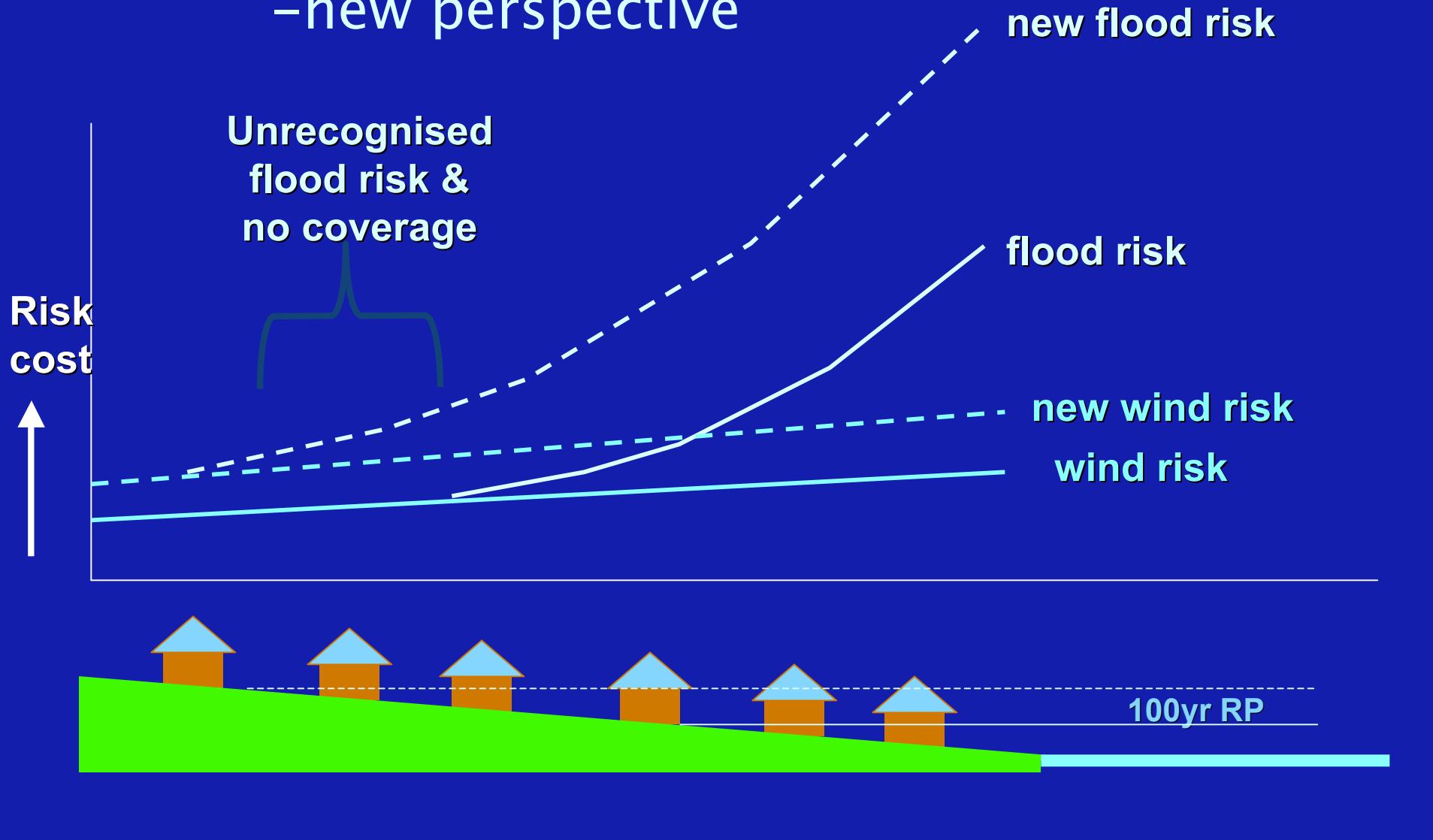


**In Hancock County – Nov 2005 - FEMA has admitted risk 'has increased' in the coastal Flood zone**

- new and replacement buildings will need to be sited up to 10 feet higher
- V zone (high velocity flooding) extends to 12 feet higher

# Who is at risk from coastal storms?

-new perspective

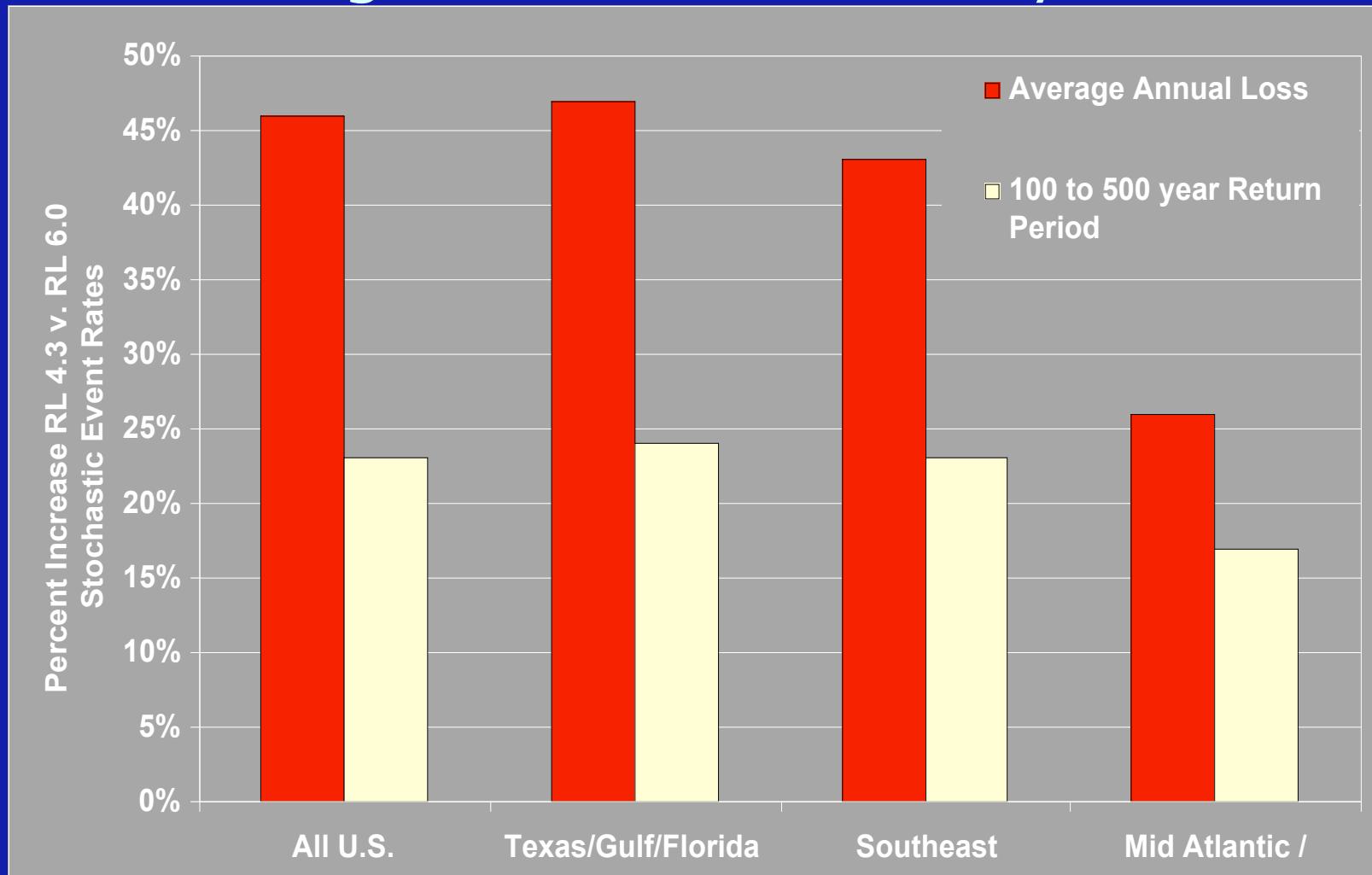


**Major development occurred during the 1960s-1990s when Hurricane activity was <50% that of today**



**Cancun, 2005 Wilma**

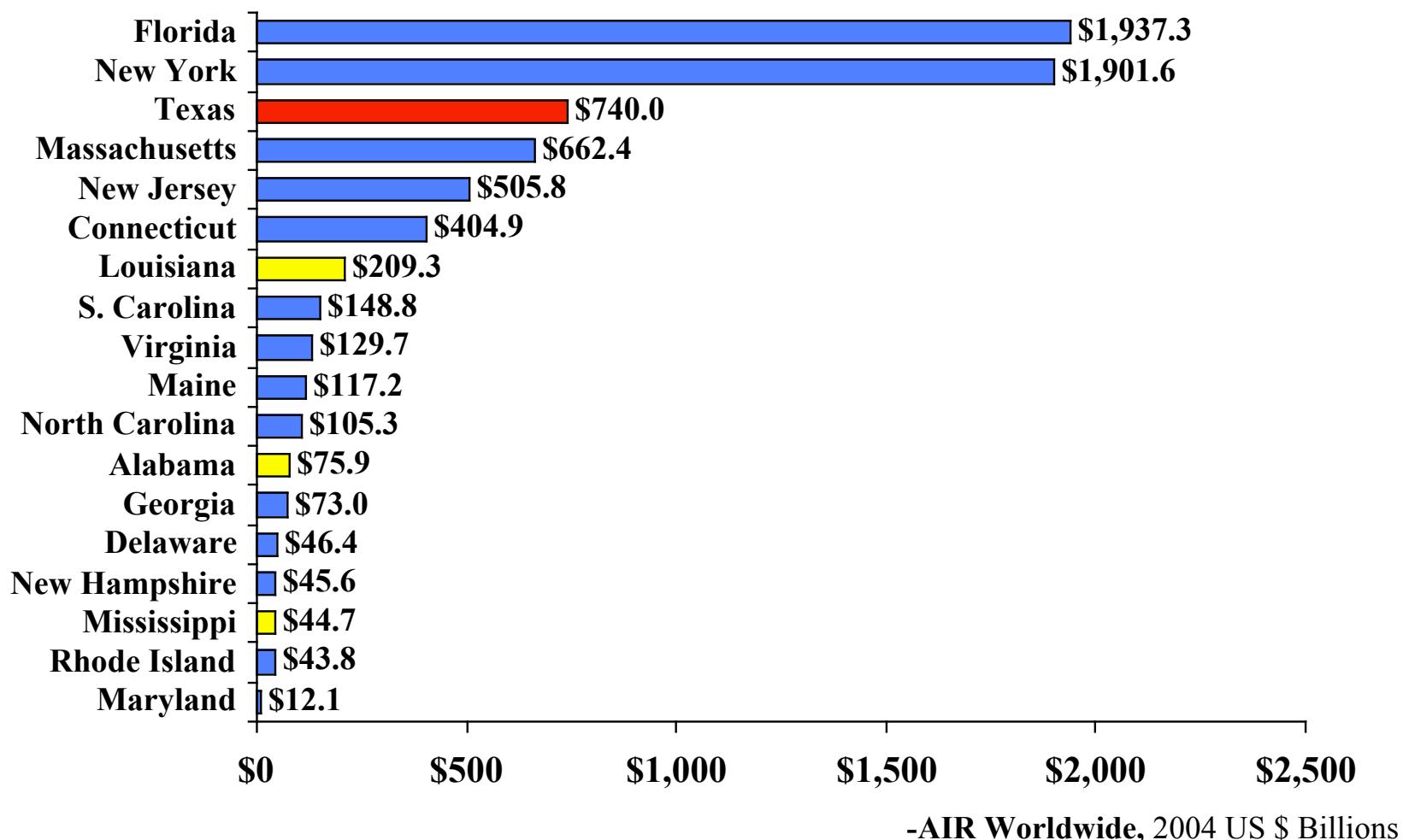
# New Insurance Model Predicts Significantly Higher Losses in next 5 years

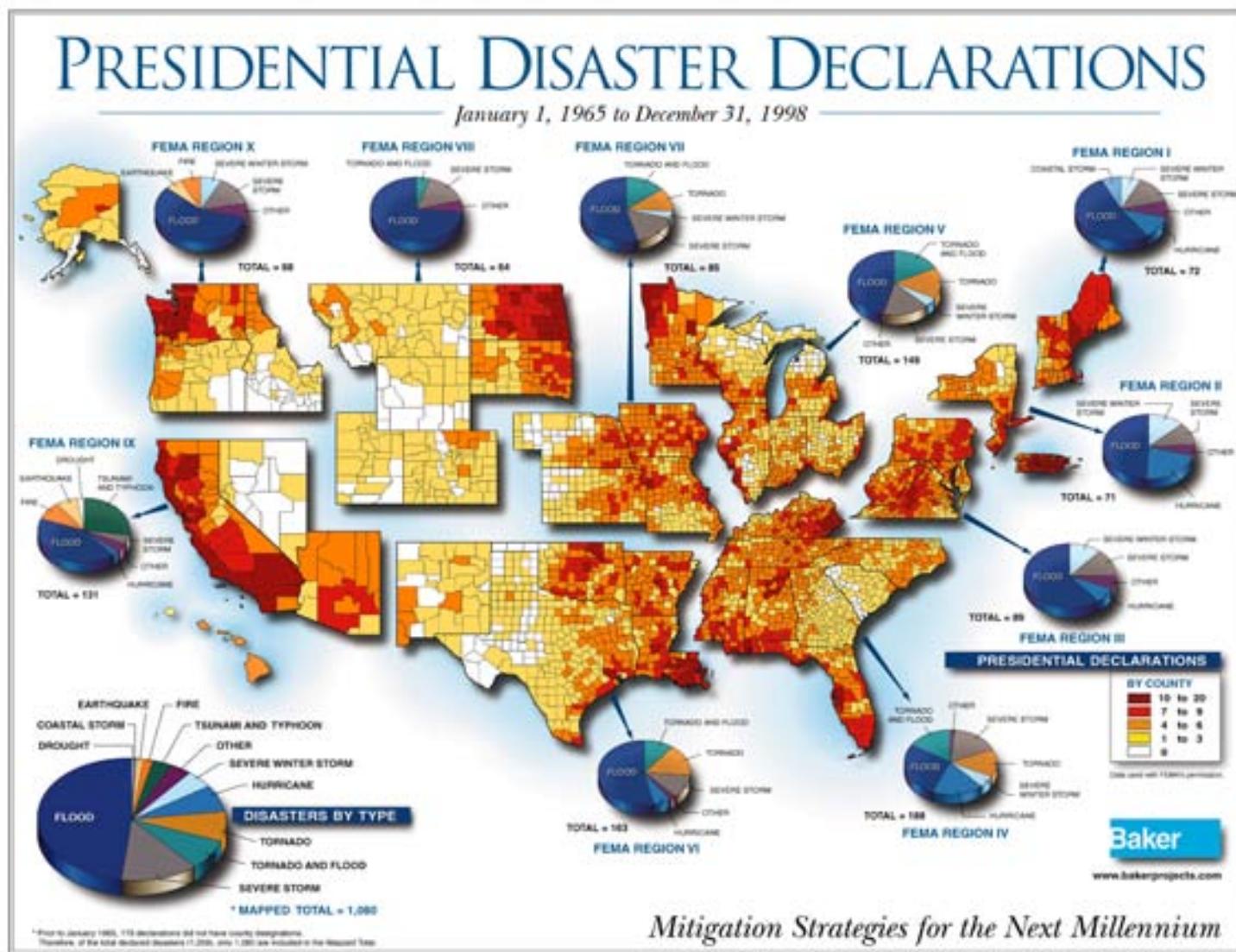


## *Insurance availability and affordability already an issue*

- Florida
  - #3 property insurer is in receivership, #2 insurer is state-backed company, which faces \$1.7B deficit
  - Insurers cancelled 500,000+ policies in past 6 months
  - Near the coast, annual premiums of several thousand dollars now rival a mortgage's cost.
- Louisiana
  - Louisiana Citizens Property Insurance Corp., the state's last-resort insurer, expects to reach 200,000 policies this year; it had none in 2004.
- Texas
  - Texas's insurer of last resort says it is down to \$1.3 billion in reserves and wants to raise rates by at least 22 percent.
- New York
  - Allstate says it won't write any new homeowners policies in New York City, Long Island or Westchester County. MetLife also cutting back.

# Total Value of Insured Coastal Exposure



*Disasters- not just a coastal issue*


# *Climate Change is a Fiduciary Issue*

Given the scientific consensus on climate change and its increasing physical impacts, this issue is of critical importance to corporations, their owners, and the stakeholders whose future will be affected by the decisions being made today.

The global nature of this phenomenon, and the movement to constrain carbon emissions, indicate that ***the risks of climate change are embedded in every business and investment portfolio, and should be on the agenda of every board of directors.***

# *Types of Climate Risk*

**Regulatory Risk** -- State, national and international regulations are put increasing pressure on energy intensive industries to invest in emission controls, purchase carbon credits, and face clean-up costs.

**Physical Risk** -- Businesses dependent on the natural world are at risk from the physical impacts of climate change. These include increased intensity and frequency of weather events, droughts, floods, storm, infestations, and sea level rise.

**Competitive/Reputational Risk** -- Companies viewed as environmentally-friendly, even within troubled industries, will likely see their reputations enhanced in comparison to companies whose politics, products or processes are viewed more negatively.

**Litigation Risk** -- Greenhouse gas emitting companies could face risk in the form of lawsuits similar to those in the tobacco and asbestos industries.

# *As investors, insurers are uniquely exposed to climate risk*

“Insurers need to consider the impact that an unstable climate could have on global asset values, which may generate a mismatch against insurance liabilities. Asset values tend to react to new information as soon as it is known, and adjust accordingly even if the effects are likely to take effect some time in the future. Insurers must prepare...underwriting for profit will be key.”

–Lloyd’s

*Pressure on primary insurers will only increase as their business partners and stakeholders grow increasingly concerned*

**Modelers** are increasingly concerned about climate change

- RMS developed first forward-looking cat model

**Brokers** are increasingly concerned about climate change

- MMC white paper; engagement with corporate clients; new products
- Willis engaging with clients

**Investors** are increasingly concerned about climate change

- \$31 trillion in investors participating in Carbon Disclosure Project
- INCR letter to 30 top insurers requesting better climate disclosure
- Mercer survey: 58% of institutional investors believe climate change is “very” or “somewhat” important in economic terms (or will be within 5 years)

**Reinsurers** are increasingly concerned about climate change

- Swiss Re, Munich Re, General Re

**Customers** are increasingly concerned about climate change

- Strong public support for federal policy action
- World Economic Forum ranked climate change as #1 business challenge

**Regulators** are increasingly concerned about climate change

- New NAIC executive task force on climate change

## *Leading insurers are taking action*

- World's largest insurance company, AIG, just released a new climate change policy
- World's largest reinsurer, Swiss Re, is heavily engaged in the climate change debate
  - lobbying for US carbon cap (McCain-Lieberman bill)
  - asking questions of D&O clients
  - directly involved in and funds research on science, economic impacts, modeling issues
- World's largest broker, Marsh, is engaging its corporate clients on the need to deal with climate risk, and developing new products/services to help clients manage these risks
  - white paper
  - client call
  - differential pricing on D&O insurance?
- One of the world's largest providers of surplus and specialty lines, Lloyd's, recently issued a strong call to action to the global insurance industry

## *What should insurers do?*

“It is time for the insurance industry to take a more leading role in understanding and managing the impact of climate change.

“Climate change must inform underwriting strategy-from the pricing of risk to the wording of policies.

“It must guide and counsel business strategy-including business development and planning.

“And it must lie at the heart of a new impetus to engage with the wider world through meaningful, tangible partnerships to mitigate risk.

-Lloyd's

## *What does that mean in practice?*

- Analyze potential impacts of climate change on your business and disclose results to shareholders
- Engage with clients, modelers, policymakers, regulators
- Improve loss data collection and analysis
- Fulfill historic role in loss prevention/mitigation
- Examine impact of climate change on invested assets
- Examine potential for new products and services
  - New Ceres report August 2006

"We'd be out of our minds if we wrote weather insurance on the opinion global warming would have no effect at all."

-Warren Buffett, May 2006